

REMARKS

Claims 1-17 and 21-27 are pending. The Office Action of March 7, 2002 has been carefully considered. Applicants appreciate the Examiner's indication that Claims 4-6, and 21-25 are allowable over the prior art. In addition, Claim 3 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Claim 3 has been rewritten in independent form including the subject matter of Claim 1, and should be allowable. New Claims 26 and 27 have been added to further define aspects of the present invention which applicant believes are patentable. Applicant requests that the Examiner consider the above amendments and the following remarks, and pass the application to allowance.

RESPONSE TO DETAILED ACTION:

Response to 35 U.S.C. §102 Rejections:

Claims 9-16 were rejected under 35 U.S.C. §102(b) as being anticipated by Utterberg (U.S. Patent No. 5,536,259).

Claim 9 recites a trocar including a substantially cylindrical cannula body. The trocar has a distal end of the cannula body having a leading edge formed by a **first plane** which is at a first angle with respect to a longitudinal axis of the cannula body, and a trailing edge formed by a **second plane** which is at a second angle with respect to the longitudinal axis of the cannula body. The first angle of the leading edge is larger than the second angle of the trailing edge.

Utterberg discloses a hypodermic cannula having a first end formed by a first cut surface 12 (**trailing edge**) defining an acute angle to the longitudinal axis. The first cut surface 12 (**trailing edge**) defines an acute angle of about 20 degrees with the longitudinal

axis of the cannula.¹ A second cut surface 20 (**leading edge**) is defined along a right hand forward portion of the oval tube edge with the angle of the cut being slightly canted clockwise at a 14½ degree angle so that the outer edge of the edge 22 of the second cut 20 is slightly lower than the inner edge to provide a cutting edge.² A third cut surface 26 (**leading edge**) is defined along a left hand forward portion of the oval tube edge at a similar angle to the second cut (14½ degrees). The cutting angle of the third cut surface 26 is twisted in the other direction (counterclockwise) by an equal angle so that the outer edge of the cut 26 is slightly lower than the inner edge 30 to provide a tissue cutting edge. The second cut and third cut define between them a forward cutting surface (**leading edge**) in the tube edge. A fourth cut surface 30 at the point intersects the second and third cut surfaces to cause the cutting surface to be spaced inwardly of the tube outer wall.

As disclosed in the specification,³ the forward cutting surface (**leading edge**) is comprised of a second cut surface and a third cut surface wherein the edge is "canted clockwise" or "twisted counterclockwise" so that the inner edge is slightly lower than the outer edge. Thus, Utterberg does not suggest or teach a distal end of the cannula body having a "**leading edge formed by a first plane**" as recited in Claim 9 of the present invention. Specifically, the clockwise and counterclockwise twisting of the cutting angles of the second (20) and third (26) cut surfaces of Utterberg are different from the plane recited in Claim 9, and such difference imparts greater complexity and cost to the fabrication process of the Utterberg device. Accordingly, Claim 9 is not anticipated by Utterberg, and should be allowable.

Claim 10 recites the trocar according to Claim 9 wherein a transition between the first plane (leading edge) and the second plane (trailing edge) is gradual. For the reasons

¹ Col. 3, lines 1-5.

² Col. 3, lines 7-13.

³ Col. 3, lines 1-13.

set forth above, and further since Utterberg does not teach or suggest a gradual transition from the first plane (leading edge) to the second plane (trailing edge), Claim 10 should be allowable.

Claims 12 and 13 recite the trocar according to Claim 9 wherein the first angle is about 20 - 35 degrees and the second angle is about 10 - 25 degrees, and a difference between the first angle and the second angle is about 2 - 20 degrees, respectively. For the reasons set forth above as to Claim 9, Claims 12 and 13 should also be allowable.

Claim 14 recites the trocar according to Claim 9, wherein the leading edge of the cannula distal end has a reverse grind extending along between 25 and 75 percent of an exterior circumference of the cannula. Utterberg does not suggest or teach that the leading edge of the cannula distal's end has a reverse grind extending along between 25 and 75 percent of an exterior circumference of the cannula as recited in Claim 14 of the present invention. Accordingly, Claim 14 is not anticipated by Utterberg, and should be allowable.

Claims 15 and 16 recite the trocar of Claim 14, wherein the reverse grind is a surface which intersects an interior surface of the cannula and an exterior surface of the cannula; and wherein a distal most tip of the cannula is located at the intersection of the interior surface and the reverse grind, respectively. For the reasons set forth above as to Claim 14, Claims 15 and 16 should be allowable.

Claim 11 recites a trocar including a substantially cylindrical cannula body. The trocar has a distal end of the cannula body having a leading edge formed by a first plane which is at a first angle with respect to a longitudinal axis of the cannula body, and a trailing edge formed by a second plane which is at a second angle with respect to the longitudinal axis of the cannula body. In addition, the trailing edge of the cannula body distal end is radiused to prevent coring or tearing of tissue.

As set forth above, Utterberg does not suggest or teach a distal end of the cannula body having a "**leading edge** formed by a first **plane**" as recited in Claim 11 of the present invention. Furthermore, Utterberg does not teach or suggest that the trailing edge of the

cannula body distal end is radiused to prevent coring or tearing of tissue. Accordingly, Claim 11 should be allowable.

Response to 35 U.S.C. §103 Rejections:

Claims 1, 2, 7, and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Harmon (U.S. Patent No. 5,772,671) in view of Harris (U.S. Patent No. 421,072 A).

Applicant encloses herewith a copy of the declaration of John R. Peery under 37 C.F.R. §1.131, filed with Applicant's Amendment and Reply on July 20, 2001. The declaration under 37 C.F.R. §1.131 overcomes the rejections of Claims 1, 2, 7, and 8 based on Harmon.

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Harmon in view of Harris, and further in view of Utterberg.

As set forth above, Applicant has filed a copy of the declaration of John R. Peery under 37 C.F.R. §1.131 to overcome the rejection of Claim 17 based on Harmon.

New Claims 26 and 27:

New Claims 26 and 27 have been added to define further aspects of the present invention which applicant believes are patentable.

Claims 26 and 27 recite the trocar according to claim 4, wherein the obturator has a tapered distal end to prevent ejection of the spring element from the cannula when the obturator is moved distally to eject the implant from the cannula; and wherein the spring element is fixed within the cannula, respectively.

Claims 26 and 27 are dependent on Claim 4 which has been indicated to be allowable, and thus Claims 26 and 27 should also be allowable.

Conclusion:

Attached hereto is a marked-up version of the changes made to a claim by the current amendment. The attached pages is captioned "Version with markings to show changes made."

It is respectfully submitted that the claims are presently in condition for immediate allowance, and such action is requested. If, however, any matters remain that can be clarified by Examiner's Amendment, the Examiner is cordially invited to contact the undersigned by telephone at the number below. In the event that there are any questions concerning the amendments or the application in general, the Examiner is respectfully urged to contact the undersigned so that prosecution may be expedited.

Respectfully submitted,

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Date: June 4, 2002

Version with Markings to Show Changes Made

In the claims:

3. (Amended) A [The] trocar [according to claim 1] comprising:
a cannula for receiving an implant and inserting the implant into an animal,
the cannula having a sharp tissue penetrating distal end;
a spring element received entirely within the cannula, the spring element
having a leaf spring for retaining the implant inside the cannula, the leaf spring applying a
frictional force against the implant sufficient to prevent the implant from sliding out of the
cannula under a weight of the implant, wherein the leaf spring is formed as a T-shaped cut
out portion; and
an obturator for delivering the implant from the cannula into the animal.